

REMARKS

This is a full and timely response to the non-final Office Action mailed June 23, 2004. Upon entry of the amendments in this response, claims 33 - 65 are pending. In particular, Applicants have added claims 33-65 and have canceled claims 1-32 without prejudice, waiver, or disclaimer. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

I. The Rejection to Claims 1 – 5, 7, 9 – 17, 20 – 25, 27, and 29 – 32 is Moot

The Office Action rejects claims 1 – 5, 7, 9 – 17, 20 – 25, 27, and 29 – 32 under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 6,137,829 to Betts (“*Betts*”). In that each of claims 1 – 5, 7, 9 – 17, 20 – 25, 27, and 29 – 32 have been canceled, the rejection of claims 1 – 5, 7, 9 – 17, 20 – 25, 27, and 29 – 32 is moot.

II. The §103(a) Rejection to Claims 6, 8, 18, 19, 26 and 28 is Moot

The Office Action rejects claims 6, 8, 19, 26, and 28 under 35 U.S.C. §103(a) as allegedly unpatentable over *Betts* in view of U.S. Patent No. 6,606,355 to Wei (“*Wei*”). In that each of claims 6, 8, 18, 19, 26 and 28 have been canceled, the rejection of claims 6, 8, 18, 19, 26 and 28 is moot.

III. New Claims 33 – 65 are Patentable Over *Betts* and *Wei*

Although the Examiner has not yet considered newly added claims 33 – 65, Applicants preemptively submit that newly added claims 33 – 65 are patentable over the

proposed combination of *Betts* and *Wei*, whether considered separately or in combination, for at least the reasons set forth below.

For example, independent claim 33 includes “*a pulse amplitude modulation (PAM) transmitter configured to transmit a point on a signal space constellation.*” However, unlike independent claim 33 neither *Betts*, nor *Wei*, disclose teach, or suggest a pulse amplitude modulation (PAM) transceiver at all. Accordingly, for at least this reason, Applicants submit that claim 33 is patentable over *Betts* or *Wei*, whether viewed separately or in combination. Furthermore, dependent claims 34 - 45, which depend therefrom, are allowable for at least the same reason.

Likewise, independent claim 46 includes the step of “*using a PAM modulator to generate a point on a signal space constellation.*” However, unlike independent claim 46, neither *Betts*, nor *Wei*, disclose teach, or suggest a pulse amplitude modulator at all. Accordingly, for at least this reason, Applicants submit that claim 46 is patentable over *Betts* or *Wei*, whether viewed separately or in combination. Furthermore, dependent claims 47 - 56, which depend therefrom, are allowable for at least the same reason.

Independent claim 57 includes “*means for using a PAM modulator to generate a point on a signal space constellation.*” However, unlike independent claim 57, neither *Betts*, nor *Wei*, disclose teach, or suggest a PAM modulator at all. Accordingly, for at least this reason, Applicants submit that independent claim 57 is patentable over *Betts* or *Wei*, whether viewed separately or in combination. Furthermore, dependent claims 58 - 65, which depend therefrom, are allowable for at least the same reason.

III. Prior Art Made of Record

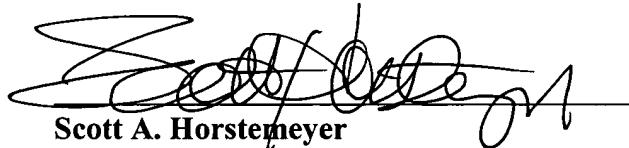
The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

CONCLUSION

The Applicants respectfully submit that all claims are now in condition for allowance, and request that the Examiner pass this case to issuance. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this response. If, however, any fee is deemed to be payable, you are hereby authorized to charge any such fee to Deposit Account No. 20-0778.

Respectfully submitted,



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